05-12-05

PTO/SB/21 (09-04)

TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Total Number of Pages in This Submission	16

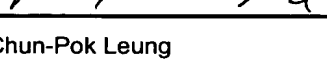
Application Number	10/652,986
Filing Date	August 28, 2003
First Named Inventor	Tomonaga, Shigenori
Art Unit	2661
Examiner Name	Unassigned
Attorney Docket Number	16869S-092800US

ENCLOSURES *(Check all that apply)*

- ☒ Fee Transmittal Form
  - ☐ Fee Attached
- ☒ Preliminary Amendment
  - ☐ After Final
  - ☐ Affidavits/declaration(s)
- ☐ Extension of Time Request
- ☐ Express Abandonment Request
- ☐ Information Disclosure Statement
- ☐ Certified Copy of Priority Document(s)
- ☐ Reply to Missing Parts/ Incomplete Application
  - ☐ Reply to Missing Parts under 37 CFR 1.52 or 1.53
- ☐ Drawing(s)
- ☐ Licensing-related Papers
- ☒ Petition to Make Special
- ☐ Petition to Convert to a Provisional Application
- ☐ Power of Attorney, Revocation Change of Correspondence Address
- ☐ Terminal Disclaimer
- ☐ Request for Refund
- ☐ CD, Number of CD(s) _____
  - ☐ Landscape Table on CD
- ☐ After Allowance Communication to TC
- ☐ Appeal Communication to Board of Appeals and Interferences
- ☐ Appeal Communication to TC **(Appeal Notice, Brief, Reply Brief)**
- ☐ Proprietary Information
- ☐ Status Letter
- ☒ Other Enclosure(s) (please identify below):
  - Return Postcard
  - Six (6) cited references

Remarks The Commissioner is authorized to charge any additional fees to Deposit Account 20-1430.

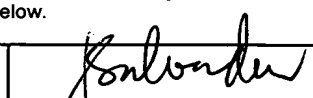
SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm Name	Townsend and Townsend and Crew LLP		
Signature			
Printed name	Chun-Pok Leung		
Date	May 10, 2005	Reg. No.	41,405

CERTIFICATE OF TRANSMISSION/MAILING

Express Mail Label: **EV 530888376 US**

I hereby certify that this correspondence is being deposited with the United States Postal Service with "Express Mail Post Office to Address" service under 37 CFR 1.10 on this date **May 10, 2005** and is addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below.

Signature			
Typed or printed name	Joy Salvador	Date	May 10, 2005

Effective on 12/08/2004.
Fees pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818).

FEE TRANSMITTAL For FY 2005

☐ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT ($) **130.00**

Complete if Known	
Application Number	10/652,986
Filing Date	August 28, 2003
First Named Inventor	Tomonaga, Shigenori
Examiner Name	Unassigned
Art Unit	2661
Attorney Docket No.	16869S-092800US

METHOD OF PAYMENT (check all that apply)

☐ Check ☐ Credit Card ☐ Money Order ☐ None ☐ Other (please identify): _____

☒ Deposit Account Deposit Account Number: 20-1430 Deposit Account Name: Townsend and Townsend and Crew LLP

For the above-identified deposit account, the Director is hereby authorized to: (check all that apply)

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FEE CALCULATION

1. BASIC FILING, SEARCH, AND EXAMINATION FEES

Application Type	FILING FEES Fee ($)	FILING FEES Small Entity Fee ($)	SEARCH FEES Fee ($)	SEARCH FEES Small Entity Fee ($)	EXAMINATION FEES Fee ($)	EXAMINATION FEES Small Entity Fee ($)	Fees Paid ($)
Utility	300	150	500	250	200	100	
Design	200	100	100	50	130	65	
Plant	200	100	300	150	160	80	
Reissue	300	150	500	250	600	300	
Provisional	200	100	0	0	0	0	

2. EXCESS CLAIM FEES

Fee Description	Fee ($)	Small Entity Fee ($)
Each claim over 20 or, for Reissues, each claim over 20 and more than in the original patent	50	25
Each independent claim over 3 or, for Reissues, each independent claim more than in the original patent	200	100
Multiple dependent claims	360	180

Total Claims	Extra Claims	Fee ($)	Fee Paid ($)
_____	-20 or HP = _____	x _____	= _____

HP = highest number of total claims paid for, if greater than 20

Indep. Claims	Extra Claims	Fee ($)	Fee Paid ($)
_____	-3 or HP = _____	x _____	= _____

HP = highest number of independent claims paid for, if greater than 3

Multiple Dependent Claims Fee ($)	Multiple Dependent Claims Fee Paid ($)
_____	_____

3. APPLICATION SIZE FEE

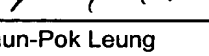
If the specification and drawings exceed 100 sheets of paper, the application size fee due is $250 ($125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

Total Sheets	Extra Sheets	Number of each additional 50 or fraction thereof	Fee ($)	Fee Paid ($)
_____ - 100 =	_____ / 50 =	_____ (round **up** to a whole number) x	_____	= _____

4. OTHER FEE(S)

	Fees Paid ($)
Non-English Specification, $130 fee (no small entity discount)	
Other: **PETITIONS TO THE COMMISSIONER**	**130.00**

SUBMITTED BY

Signature		Registration No. (Attorney/Agent) 41,405	Telephone 650-326-2400
Name (Print/Type)	Chun-Pok Leung		Date May 10, 2005

PATENT
Attorney Docket No.: 16869S-092800US
Client Ref. No.: W1176-01

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

SHIGENORI TOMONAGA et al.

Application No.: 10/652,986

Filed: August 28, 2003

For: INFORMATION PROCESSING APPARATUS AND CONTROL METHOD OF INFORMATION PROCESSING APPARATUS AND PROGRAM FOR THE SAME

Customer No.: 20350

Examiner: Unassigned

Technology Center/Art Unit: 2661

Confirmation No.: 2985

PETITION TO MAKE SPECIAL FOR NEW APPLICATION UNDER M.P.E.P. § 708.02, VIII & 37 C.F.R. § 1.102(d)

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This is a petition to make special the above-identified application under MPEP § 708.02, VIII & 37 C.F.R. § 1.102(d). The application has not received any examination by an Examiner.

(a) The Commissioner is authorized to charge the petition fee of $130 under 37 C.F.R. § 1.17(i) and any other fees associated with this paper to Deposit Account 20-1430.

(b) All the claims are believed to be directed to a single invention. If the Office determines that all the claims presented are not obviously directed to a single invention, then Applicants will make an election without traverse as a prerequisite to the grant of special status.

(c) Pre-examination searches were made of U.S. issued patents, including a classification search and a key word search. The classification search was conducted on or around April 15, 2005 covering Class 370 (subclasses 248 and 254), Class 709 (subclasses 223 and 224), and Class 715 (subclass 736), by a professional search firm, Lacasse & Associates, LLC. The key word search was performed on the USPTO full-text database including published U.S. patent applications. The inventors further provided a reference considered most closely related to the subject matter of the present application (see reference #6 below), which was cited in the Information Disclosure Statement filed with the application on August 28, 2004.

(d) The following references, copies of which are attached herewith, are deemed most closely related to the subject matter encompassed by the claims:

(1) U.S. Patent No. 6,823,477 B1;

(2) U.S. Patent No. 6,845,395 B1;

(3) U.S. Patent Publication No. 2002/0112043 A1;

(4) U.S. Patent Publication No. 2004/0059816 A1;

(5) U.S. Patent Publication No. 2004/0215764 A1; and

(6) Japanese Patent Publication No. JP 2002-063063.

(e) Set forth below is a detailed discussion of references which points out with particularity how the claimed subject matter is distinguishable over the references.

A. Claimed Embodiments of the Present Invention

The claimed embodiments relate to information processing and control methodology of information processing to update information items being displayed.

Independent claim 1 recites a computer-readable storage medium having a program for use in an information processing apparatus having a function of displaying at a user interface a plurality of information items concerning a communication path for sending a data input/output request to a storage device. The program comprises code for updating at least one of said information items being displayed when detecting that obstruction occurs at

said communication path based on an access to said storage device, and/or updating at least one of said information items being displayed when receiving from said user interface an input for updating said information being displayed.

Independent claim 5 recites an information processing apparatus having a function of displaying at a user interface a plurality of information items concerning a communication path for sending a data input/output request to a storage device. The apparatus comprises a controller configured to update at least one of said information items being displayed when detecting that obstruction occurs at said communication path based on an access to said storage device, and/or to update at least one of said information items being displayed when receiving from said user interface an input for updating said information being displayed.

Independent claim 9 recites a control method of an information processing apparatus having a function of displaying at a user interface a plurality of information items concerning a communication path for sending a data input/output request to a storage device. The method comprises updating at least one of said information items being displayed when detecting that obstruction occurs at said communication path based on an access to said storage device, and/or updating at least one of said information items being displayed when receiving from said user interface an input for updating said information being displayed.

One of the benefits that may be derived is that it is possible to perform update of path information in a way pursuant to the needs of the operator who monitors the status of such communication paths, and to rapidly perform updating of certain information that meets the operator's needs.

B. Discussion of the References

None of the following references disclose updating at least one of said information items being displayed when detecting that obstruction occurs at said communication path based on an access to said storage device, and/or updating at least one of said information items being displayed when receiving from said user interface an input for updating said information being displayed, as recited in independent claims 1, 5, and 9. For instance, claim 1 recites a program that comprises at least one of: code for updating at least one of the information items being displayed in accordance with a state of the communication

path; and code for updating at least one of the information items being displayed when receiving from the user interface an input for updating the information being displayed. Claim 5 recites an apparatus that comprises at least one of: means for updating at least one of the information items being displayed in accordance with a state of the communication path; and means for updating at least one of the information items being displayed when receiving from the user interface an input for updating the information being displayed. Claim 9 recites a method that comprises at least one of the steps of: updating at least one of the information items being displayed in accordance with a state of the communication path; and updating at least one of the information items being displayed when receiving from the user interface an input for updating the information being displayed.

1. U.S. Patent No. 6,823,477 B1

The patent to Cheng et al. (6,823,477 B1), assigned to Adaptec, Inc., provides for a Method and Apparatus for a Segregated Interface for Parameter Configuration in a Multi-Path Failover System. User interface 402 comprising a failover graphical interface module 404, performs a plurality of functions to assist the user in configuring and maintaining the failover filter driver and computer storage system. The user may change the current configuration such as LUN masking and used host bus adapters and save the changes to a file. The user may also view link status and I/O status of the system. See Figure 4; and column 8, lines 33-36 and 50-54; column 8, line 66 to column 9, line 11.

This reference relates to allowing the user to change current configuration and view link status and I/O status of the system. It does not, however, teach updating at least one of said information items being displayed when detecting that obstruction occurs at said communication path based on an access to said storage device, and/or updating at least one of said information items being displayed when receiving from said user interface an input for updating said information being displayed, as recited in independent claims 1, 5, and 9.

2. U.S. Patent No. 6,845,395 B1

The patent to Blumenau et al. (6,845,395 B1), assigned to EMC Corp., provides for a Method and Apparatus for Identifying Network Devices on a Storage Network. A storage network topology is displayed using a graphical user interface wherein the paths

between different host processor/HBA pairs and storage system/port pairs in the storage system are configured and modified. See column 26, lines 31-35 and column 28, lines 18-32.

This reference is directed to a graphical user interface that permits the user to graphically view a topology of the network at varying levels of detail, selectable by the user, and permits the user to allow or deny access to storage systems or a particular storage volume on the storage system from one or more of the host processors, host bus adapters, etc., by selecting and manipulating graphical representations thereof. It does not, however, teach updating at least one of said information items being displayed when detecting that obstruction occurs at said communication path based on an access to said storage device, and/or updating at least one of said information items being displayed when receiving from said user interface an input for updating said information being displayed, as recited in independent claims 1, 5, and 9.

3. U.S. Patent Publication No. 2002/0112043 A1

The patent application publication to Kagami et al. (2002/0112043 A1) provides for a Method and Apparatus for Storage on Demand Service. Host computer 1400 comprises SoD agent 1410 operable with an operating system 1420 and an I/O path setting table 4100. SoD agent 1410 receives an I/O path setting request from SoD center system 1100 and updates the I/O path setting table. Figure 10 illustrates a user interface screen 1010 wherein the user may establish a connection between resources to create I/O paths. Based on the inputs of the user, I/O path setting table 4100 is updated to reflect the new I/O paths created. A legend panel 1004 provides useful information about the paths to the user. See Figures 1 and 10; and paragraphs [0036], [0039], [0042], [0047], [0049], and [0050].

This reference relates to a user interface that allows the user to update I/O path information. It does not, however, teach updating at least one of said information items being displayed when detecting that obstruction occurs at said communication path based on an access to said storage device, and/or updating at least one of said information items being displayed when receiving from said user interface an input for updating said information being displayed, as recited in independent claims 1, 5, and 9.

4. U.S. Patent Publication No. 2004/0059816 A1

The patent application publication to Takaoka et al. (20040059816 A1), assigned to Hitachi, Ltd., provides for a Computer Management System and Management Program. Connection relationships among a plurality of devices interconnected over a storage network are visualized. Management computer 200 comprises display 210 used to present connection relationship diagram 1300 to the user by management software 241. Storage system 1000 notifies computers connected to network 500 of a change in connection relationships. Controller 1030 updates the information contained in the connection information 1051 and these changes are acquired by the management computer 200 to redisplay the updated connection relationship diagram. See Figures 1, 2, and 9; and paragraphs [0058], [0070], [0088], [0089], [0094], and [0203].

This reference is directed to a display that uses an output screen to visualize the connection relationships among a plurality of devices inter connected over a storage network without the necessity of implementing connection information acquiring means in an object computer. While the reference discloses to manage path information at the storage apparatus side, it does not teach detecting abnormality concerned with access to the storage apparatus at the information processing apparatus side to update display.

The reference fails to teach updating at least one of said information items being displayed when detecting that obstruction occurs at said communication path based on an access to said storage device, and/or updating at least one of said information items being displayed when receiving from said user interface an input for updating said information being displayed, as recited in independent claims 1, 5, and 9.

5. U.S. Patent Publication No. 2004/0215764 A1

The patent application publication to Allen et al. (2004/0215764 A1), assigned to Sun Microsystems, Inc., provides for a Method, System, and Program for Rendering a Visualization of Aggregations of Network Devices. A user interface window displays a visualization of a topology view comprising representations of host systems 202a, 202b and 202c, storage devices 204a, 204b, ..., 204h and their connections to switches 206a and 206b. Status boxes 208a and 208b visualize the status of connection between host/storage device and switch indicating if the connection is operational. User is able to add/remove/modify

devices or aggregation of devices from the current selected aggregate device representation using a menu. See Figures 9 and 10; and paragraphs [0040], [0049], [0057], [0058], and [0059].

This reference discloses displaying the status of connection between host/storage devices and switches, and allowing the user to make changes. It does not, however, teach updating at least one of said information items being displayed when detecting that obstruction occurs at said communication path based on an access to said storage device, and/or updating at least one of said information items being displayed when receiving from said user interface an input for updating said information being displayed, as recited in independent claims 1, 5, and 9.

6. Japanese Patent Publication No. JP 2002-063063

This reference relates to a technique to automatically perform best security management for a SAN by unitarily integrating/managing conventional discrete security methods. An integrating/managing mechanism 1 for integrating/managing SAN is installed, so that access relations between hosts 2 and storage devices 4 can be collectively managed by using the managing mechanism 1. Access paths, that is, areas on the storage device 4 side which are to be accessed from the host 2 side, and fiber channel adaptors (FCAs) and host bus adaptors (HBAs), which are used when the storages are accessed, are set in the mechanism 1. Based on access path information set, the mechanism 1 performs storage settings, a zoning setting, and settings for which area to permit access, for SAN managing mechanism 2a of the hosts 2, a zoning setting mechanism 3a of a switch 3, and storage managing mechanisms 4a of the storage devices 4, respectively.

As discussed in the present application at page 2, lines 2-15, the reference discloses a conventional information processing mechanism. However, the information items as to these communication paths would include ones that are required to be rapidly updated and the others that are free from such requirement. In addition, as the computer system increases in scale, the information as to the communication paths to be displayed becomes larger in amount accordingly. Prior art technologies lack specific consideration for processing loads as given to the computer when updating these display contents and also consideration for rapidly performing the updating tasks required.

The reference fails to teach updating at least one of said information items being displayed when detecting that obstruction occurs at said communication path based on an access to said storage device, and/or updating at least one of said information items being displayed when receiving from said user interface an input for updating said information being displayed, as recited in independent claims 1, 5, and 9.

(f) In view of this petition, the Examiner is respectfully requested to issue a first Office Action at an early date.

Respectfully submitted,

Chun-Pok Leung
Reg. No. 41,405

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Attachments
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